Peaceful Nuclear Cooperation

U.S. Support for NPT Article IV

UNITED STATES & TANZANIA

Through the International Atomic Energy Agency (IAEA), the United States contributes to the work of many countries using nuclear materials and technology for peaceful purposes. In recent years, U.S. support has focused on achieving tangible and lasting benefits in fields that are vital to human development, including agriculture, human health, water resource management, and human resource development. Since 2000, the IAEA has approved and funded $6,045,321, including $244,397 in 2013, under its Technical Cooperation (TC) program for projects in Tanzania.

The United States views its support for the peaceful uses of nuclear energy as a critical part of its efforts to strengthen the IAEA and the global nuclear nonproliferation regime. About 25% of the IAEA's annual budget for peaceful nuclear assistance comes from the U.S. In 2012, the U.S. contributed almost $22 million to the Technical Cooperation Fund and over $6 million in additional funding for training, fellowships, and cost-free experts.

In addition to these longstanding contributions to the IAEA's peaceful uses programs, at the 2010 NPT Review Conference, the U.S. announced a $100 million Initiative to further expand this support over the next five years. The U.S. pledged $50 million towards the IAEA's Peaceful Uses Initiative (PUI), focusing on human health, food security, water resource management, and nuclear power infrastructure development. The U.S. has already allocated over $27 million to specific PUI projects, and welcomes the contributions of Japan, the Republic of Korea, New Zealand, the Czech Republic, Hungary, Sweden, Australia, France, Indonesia, Brazil, Italy, the UK and Kazakhstan to this important Initiative.

NUCLEAR ENERGY

Renewed interest in nuclear energy, in conjunction with continually increasing prices of conventional energy options, has created new challenges for many African countries, particularly those with emerging economies. Some Member States lack sufficient natural energy resources to respond to steadily increasing energy demands, as well as the required knowledge or skilled human resources that would enable them to consider alternatives such as nuclear energy.

Tanzania is participating in a regional TC project sponsored by the United States to increase awareness of the requirements and challenges related to the feasibility of nuclear power programs. The project addresses regional priorities and concerns related to nuclear energy, including the requirements for conducting comprehensive studies to explore the feasibility of nuclear power, developing nuclear safety frameworks, and promoting regional cooperation and common understanding about major nuclear power issues, such as nuclear material, radioactive waste management, legal and safety obligations, human and financial resources, and reliable technologies.

Beyond regional cooperation, interregional cooperation provides additional benefits. Tanzania is currently participating in an interregional TC project sponsored by the United States that aims to support nuclear power introduction by emphasizing human resource development, project management and integrated management systems. The project will also establish a global network for information exchange and knowledge transfer in related fields including safety and security, grid and siting, engineering and technology, fuel and waste, stakeholder involvement and communication, and industrial involvement.

Renewed interest in nuclear energy has also created new challenges for the majority of African countries with uranium resources and other radioactive ores as many lack appropriate

1. *International radiation measurement exercise. Credit: Dean Calma/IAEA*
2. *2003 IAEA-Argonne regional training course on isotope methods for watershed management. Credit: Argonne National Laboratory*
3. *Nuclear techniques can make cocoa trees resistant to a virus that kills millions each year. Credit: David Kinley III/IAEA*

legislative frameworks for regulating activities related to uranium exploration and exploitation in order to protect their interests, the environment and the public at large.

Tanzania is currently participating in a regional TC project sponsored by the United States to strengthen participating Member States' capabilities for effective and efficient management of uranium resources and other radioactive ores, as well as to build the legislative framework to effectively regulate related activities.

NUCLEAR SAFETY

The use of nuclear technology has great potential to help shape the future of developing countries, but is not without some risk. In recognition of this, Tanzania recently participated in a regional TC project funded by the United States to strengthen national regulatory infrastructures for the control of radiation sources. Tanzania now currently participates in another regional TC project, also funded by the United States to maintain these regulatory infrastructures and enhance their effectiveness and sustainability.

Self-assessment and regional networking can also significantly contribute to strengthening national regulatory infrastructures, so Tanzania is currently participating in a regional TC project sponsored by the United States to improve the performance of regulatory systems and conform to the requirements of international standards through self-assessment and enhanced regional cooperation. Tanzania is also extending its cooperation by participating in an interregional TC project sponsored by the United States to strengthen cradle-to-grave control of radioactive sources in the Mediterranean region.

RADIATION PROTECTION

Through additional U.S.-supported regional TC projects, Tanzania is also currently working to strengthen occupational radiation protection, radiation protection of patients during medical exposure, as well as control of public exposures.

Furthermore, disused facilities and sites contaminated because of activities involving the use of radioactive material pose continuing health risks to adjacent communities and, potentially, to the wider public. Tanzania is currently participating in an interregional TC project sponsored by the United States that will provide assistance toward the efficient clean-up of radioactive contaminated facilities and sites.

EMERGENCY MANAGEMENT

Radiation emergencies not only risk injury to individuals, but can also contaminate large territories and affect the living conditions of communities. Tanzania is currently participating in a regional TC project sponsored by the United States to strengthen participating countries' national arrangements for response to radiological and nuclear emergencies and improve their compliance with international standards.

AGRICULTURE

Nuclear and isotopic techniques can provide great insight into the productivity and effectiveness of various irrigation systems. Tanzania is therefore currently participating in a regional project sponsored by the United States to develop and pilot test appropriate irrigation systems, methods and related water-nutrient management practices for small-scale farmers in order to increase yield, quality of crops and income.

Additionally, the livestock industry is an important sector of the Tanzanian economy, but poor soil fertility, insect pests and disease contribute to low livestock production. The United States is currently sponsoring a national TC project, through which Tanzania is working to utilize sustainable applications of nuclear and related techniques to address these issues and improve livestock production and productivity.

HUMAN HEALTH

One of the greatest challenges developing countries face in fighting cancer is devising plans for building cancer control capacity. In recognition of this, the IAEA's Programme of Action for Cancer Therapy (PACT) has developed PACT Model Demonstration Sites (PMDS) in eight Member States, including Tanzania. These sites, supported with contributions from the United States, aim to demonstrate the effectiveness of evidence-based strategies and the benefits of synergic partnerships for the advancement of comprehensive cancer capacity building. The PMDS benefit from provision of radiation medicine equipment, expert missions, and additional cancer control capacity building activities.

HUMAN RESOURCES

Since 2000, the United States has hosted multiple IAEA training courses that included Tanzanian participants in fields such as isotope hydrology, quality assurance in radiotherapy, nuclear security, nuclear power and nuclear safety infrastructure, and introducing and expanding nuclear power programs. Training was also provided in the U.S. through the IAEA Fellowship Program to 12 Tanzanians, three of which were sponsored by the United States, in fields including nuclear knowledge management, radiation protection, plant breeding and genetics, insect pest control, and nuclear medicine imaging.

2008 IAEA-Argonne training course on quality assurance in radiotherapy. Credit: Argonne National Laboratory

FOR ADDITIONAL INFORMATION, CONTACT:
Office of Multilateral Nuclear and Security Affairs, U.S. Department of State, 2201 C. Street NW, Washington, DC 20520 | www.state.gov